

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	10/541188	US-PGPUB; USPAT	OR	OFF	2008/10/20 18:46
L2	913439	semiconduct\$5 same (substrate\$2 layer\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L3	27513	(waveguide\$1 wave near1 guide\$1) same layer\$1	US-PGPUB; USPAT	OR	OFF	2008/10/20 18:53
L4	5153	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through path\$1))) same (waveguide\$1 wave near1 guide\$1) same layer\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L5	1162	((optical adj1 (cavit\$3 via\$1)) (vias hole\$1 aperture\$1 opening\$1) (optical near1 (path\$1 passag\$3 pass adj1 through))) near12 (mirror\$1 reflect\$5) same (waveguide\$1 wave near1 guide\$1) same ((second adj1 layer\$1) layers substrate\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L6	1519	((opening\$1 channel\$1) (optical near2 (path\$1 passag \$3 pass adj1 through))) near12 (mirror\$1 reflect\$5) same (waveguide\$1 wave near1 guide\$1) same ( layer \$1 substrate\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L7	653	L2 and L3 and L6	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L8	453	L7 and semiconduct\$5 near9 (substrate\$2 layer\$1 film\$1 coat\$4) and (ld\$1 laser\$1 vcsel emit\$5 light near1 sourc \$1 photo photodetect\$4 photodiode\$2 detect\$4 receiv \$4 device) near12 (reflect\$5 mirror\$2)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L9	314	L8 and (photo photodetect\$4 photodiode\$2 detect\$4 receiv \$4) near12 (reflect\$4 mirror \$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L10	216	L9 and (ld\$1 laser\$1 vcsel emit \$5 light near1 sourc\$1) near12 (reflect\$4 mirror\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53

L11	175	L10 and (photolithog\$5 etch\$4) and (deposit\$4 grow\$4)	US-RGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L12	775264	semiconduct\$5 near9 (substrate\$2 layer\$1)	US-RGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L13	358	L2 and L3 and L4 and L5	US-RGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L14	227449	(chann\$4 inclin\$5 angl\$2) near12 (reflect\$4 mirror\$1)	US-RGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L15	244	L13 and L14	US-RGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L16	428225	(ld\$1 laser\$1 vcsel emit\$5 light near1 sourc\$1) near12 (reflect\$4 mirror\$1)	US-RGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L17	443173	(photo photodetect\$4 photodiod\$2 detect\$4 receiv \$4) near12 (reflect\$4 mirror \$1)	US-RGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L18	121	L15 and L16 and L17	US-RGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L19	63	L12 and L18	US-RGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L20	270892	(ld\$1 laser\$1 vcsel emit\$5 light near1 sourc\$1 photo photodetect\$4 photodiod\$2 detect\$4 receiv\$4 device) near7 form\$4 near7 (semiconduct\$4)	US-RGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L21	117	L13 and L20	US-RGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L22	85	L21 not L19	US-RGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L23	75	L22 and (photolithog\$5 etch \$4)	US-RGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L24	63	L23 and (photo photodetect\$4 photodiod\$2 detect\$4 receiv \$4 ld\$1 laser\$1 vcsel emit\$5 light near1 sourc\$1) near12 (reflect\$4 mirror\$1)	US-RGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L25	50	L24 and grow\$4	US-RGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53

L26	11010	(wedg\$3 triangl\$2 pyramid) near7 (reflect\$4 mirror\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L27	6	L13 and L26	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L28	36082	(conical pyramid\$4 semispherical spheric\$4) near12 (reflect\$4 mirror\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L29	23	L13 and L26	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L30	131	L13 and L16 and L17 and (photolithog\$5 etch\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L31	131	L30 and semiconduct\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L32	98	L31 and (photolithog\$5 etch \$4) and grow\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L33	127	L11 not (L32 L29 L27 L19 L25 L29)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:53
L34	1	(US-20030039455-\$).did.	US-PGPUB	OR	OFF	2008/10/20 18:55
L35	2	10/541188	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:56
L36	1	35 and (emit\$5 ld led laser substrate\$2) same (semiconduct\$4 material)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 18:59
L37	1	35 and (emit\$5 ld led laser substrate\$2 optical adj 1 element\$2) same (semiconduct\$4 material)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 19:03
L38	1	35 and (substrate\$2) near12 (semiconduct\$4 material)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 19:12
L39	1	34 and (substrate\$2) near12 (semiconduct\$4 material)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 19:13
L40	1	34 and (substrate\$2) near12 (semiconduct\$4 material) same (emit\$5 ld led laser substrate\$2 optical adj 1 element\$2)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 19:34
L41	1	35 and (substrate\$2) near12 (semiconduct\$4 material) same (emit\$5 ld led laser substrate\$2 optical adj 1 element\$2)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/10/20 19:34

S1	0	10/799026	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 12:25
S2	3	"6611635".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 17:18
S3	4413	(waveguides wave near1 guides) same layers	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 13:44
S4	2900	(layer\$1 substrat\$2 backplane back adj1 plane strip\$2) near7 (flex\$4 soft\$3 polymer \$3 kapto\$1) same (waveguide \$1 wave near1 guide\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 13:50
S5	1118	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through))) same (waveguide \$1 wave near1 guide\$1) same layers	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 16:05
S6	1131	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through))) same (waveguide \$1 wave near1 guide\$1) same ((second adj1 layer\$1) layers)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 14:00
S7	71	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through))) near12 reflect\$5 same (waveguide\$1 wave near1 guide\$1) same ((second adj1 layer\$1) layers)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 14:01
S8	757	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through))) near12 reflect\$5 same (waveguide\$1 wave near1 guide\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 16:03
S9	83	S3 and S4 and S5 and S6	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 14:21
S10	17	S9 and S8	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 14:22
S11	6	S9 and S7	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/25 14:24

S12	11	S10 not S11	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/25 13:27
S13	4	("6706546" "6684007").pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 15:58
S14	2	S8 and S13	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 16:10
S15	2309	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through))) same (waveguide \$1 wave near1 guide\$1) same layer\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 16:03
S16	11384	reflect\$5 same (waveguide\$1 wave near1 guide\$1 cor\$1) same layer\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 16:06
S17	57	S3 and S4 and S6 and S16	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 16:06
S18	33	S17 and (board\$1 backplane \$1) same (electr\$5 circuit\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 17:15
S19	0	S18 not "18"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 16:09
S20	26	S18 not S10	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 17:11
S21	2	S13 and S16	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/03/28 16:10
S23	3	("6556734" "6684007" "6706546").pn.	US-PGPUB; USPAT	OR	OFF	2005/03/28 17:14
S24	3	S23 and (board\$1 backplane \$1) same (electr\$5 circuit\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/25 13:03
S25	2	"6684007".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/25 13:57
S26	1	S25 and (FILMS layers multi \$5 near1 layer\$1 plural\$5 near1 layer\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/25 13:25
S27	2	"6556734".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/25 13:25
S28	4728	(waveguides wave near1 guides) same layers	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/25 13:27

S29	3117	((layer\$1 substrat\$2 backplane back adj1 plane strip\$2) near7 (flex\$4 soft\$3 polymer \$3 kapto\$1) same (waveguide \$1 wave near1 guide\$1))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/25 13:27
S30	1225	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through)))) same (waveguide \$1 wave near1 guide\$1) same layers	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/25 13:27
S31	1239	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through)))) same (waveguide \$1 wave near1 guide\$1) same ((second adj1 layer\$1) layers)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/25 13:27
S32	76	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through)))) near12 reflect\$5 same (waveguide\$1 wave near1 guide\$1) same ((second adj1 layer\$1) layers)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/25 13:27
S33	800	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through)))) near12 reflect\$5 same (waveguide\$1 wave near1 guide\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/25 13:27
S34	97	S28 and S29 and S30 and S31	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/25 13:27
S35	20	S34 and S33	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/25 13:27
S36	7	S34 and S32	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/25 13:27
S37	13	S35 not S36	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/31 19:09
S38	2	("6785447" "6556734").pn.	US-PGPUB; USPAT	OR	OFF	2005/08/25 14:22
S39	2	S38 and (flex\$5 near7 (layer \$1 film\$3 waveguide\$1))	US-PGPUB; USPAT	OR	OFF	2005/08/25 14:25
S41	2	("6684007" "6556734").pn.	US-PGPUB; USPAT	OR	OFF	2005/08/25 14:25
S42	2	S41 and (flex\$5 near7 (layer \$1 film\$3 waveguide\$1))	US-PGPUB; USPAT	OR	OFF	2005/08/30 14:02

S43	2	("6684007" "6556734").pn.	US-PGPUB; USPAT	OR	OFF	2005/08/30 14:00
S44	2	S43 and (flex\$5 near7 (layer \$1 film\$3 waveguide\$1))	US-PGPUB; USPAT	OR	OFF	2005/08/30 14:09
S45	2	S43 and (layer\$1 film\$3 waveguide\$1)	US-PGPUB; USPAT	OR	OFF	2005/08/30 14:18
S47	2	S43 and (cor\$1 active guid\$4 layer\$1 film\$3 waveguide\$3 wave near1 guid\$4)	US-PGPUB; USPAT	OR	OFF	2005/08/30 14:28
S48	4734	(waveguides wave near1 guides) same layers	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/30 15:35
S49	3123	(layer\$1 substrat\$2 backplane back adj1 plane strip\$2) near7 (flex\$4 soft\$3 polymer \$3 kapto\$1) same (waveguide \$1 wave near1 guide\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/30 15:35
S50	1228	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through))) same (waveguide \$1 wave near1 guide\$1) same layers	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/30 15:35
S51	1242	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through))) same (waveguide \$1 wave near1 guide\$1) same ((second adj1 layer\$1) layers)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/30 15:35
S52	77	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through))) near12 reflect\$5 same (waveguide\$1 wave near1 guide\$1) same ((second adj1 layer\$1) layers)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/30 15:35
S53	801	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through))) near12 reflect\$5 same (waveguide\$1 wave near1 guide\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/30 15:35
S54	97	S48 and S49 and S50 and S51	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/30 15:35
S55	20	S54 and S53	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/30 15:35

S56	7	S54 and S52	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/30 15:35
S57	13	S55 not S56	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/30 15:35
S58	4734	(waveguides wave near1 guides) same layers	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:08
S59	3123	((layer\$1 substrat\$2 backplane back adj1 plane strip\$2) near7 (flex\$4 soft\$3 polymer \$3 kapto\$1) same (waveguide \$1 wave near1 guide\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/31 19:09
S60	1228	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through))) same (waveguide \$1 wave near1 guide\$1) same layers	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:11
S61	1242	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through))) same (waveguide \$1 wave near1 guide\$1) same ((second adj1 layer\$1) layers)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/31 19:09
S62	77	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through))) near12 reflect\$5 same (waveguide\$1 wave near1 guide\$1) same ((second adj1 layer\$1) layers)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:15
S63	801	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through))) near12 reflect\$5 same (waveguide\$1 wave near1 guide\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/31 19:09
S64	97	S58 and S59 and S60 and S61	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/31 19:09
S65	20	S64 and S63	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/31 19:09
S66	7	S64 and S62	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/31 19:09



S67	13	S65 not S66	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/08/31 19:09
S68	2	"6345142".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/09/01 10:29
S69	0	S68 and (coupl\$1 wavelenghts)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/09/01 10:29
S70	1	S68 and (coupl\$3 wavelengt \$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/09/01 10:29
S71	192335	(chann\$4 inclin\$5 angl\$2) near12 (reflect\$4 mirror\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:24
S72	11	("20050041906" "20040120675" "20030099426" "20020028045" "7068871" "7024067" "6996303" "6980724" "6934455" "5999670" "5170448").pn.	US-PGPUB; USPAT	OR	OFF	2006/11/07 12:23
S73	1	10/541188	US-PGPUB; USPAT	OR	OFF	2006/11/07 12:25
S74	14	("5170448" "6934455" "20060126995" "20060245681" "20050041906" "7068871" "7024067" "5999670" "20050201707" "6996303" "20040120675" "6980724" "20030099426" "20020028045").pn.	US-PGPUB; USPAT	OR	OFF	2006/11/07 20:46
S75	5	S74 and semiconductor\$5 same (substrate\$2 layer\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:06
S76	765133	semiconductor\$5 same (substrate\$2 layer\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:07
S77	646235	semiconductor\$5 near9 (substrate\$2 layer\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:30
S80	1	S73 and (waveguide\$1 wave near1 guide\$1) same layer\$1	US-PGPUB; USPAT	OR	OFF	2006/11/07 13:10
S81	0	S73 and (waveguides wave near1 guide\$1) same layer\$1	US-PGPUB; USPAT	OR	OFF	2006/11/07 13:09
S82	22507	(waveguide\$1 wave near1 guide\$1) same layer\$1	US-PGPUB; USPAT	OR	OFF	2006/11/07 13:10

S83	1	S73 and ((optical adj1 (cavit \$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through path\$1)))) same (waveguide\$1 wave near1 guide\$1) same layer\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:14
S84	4075	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through path\$1)))) same (waveguide\$1 wave near1 guide\$1) same layer\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:14
S85	0	S73 and ((optical adj1 (cavit \$3 via\$1)) (vias hole\$1 aperture\$1 opening\$1) (optical near1 (passag\$3 pass adj1 through))) near12 (mirror \$1 reflect\$5) same (waveguide \$1 wave near1 guide\$1) same ((second adj1 layer\$1) layers)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:17
S86	1	S73 and ((optical adj1 (cavit \$3 via\$1)) (vias hole\$1 aperture\$1 opening\$1) (optical near1 (path\$1 passag \$3 pass adj1 through))) near12 (mirror\$1 reflect\$5) same (waveguide\$1 wave near1 guide\$1) same ((second adj1 layer\$1) layers)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:18
S87	1	S73 and ((optical adj1 (cavit \$3 via\$1)) (vias hole\$1 aperture\$1 opening\$1) (optical near1 (path\$1 passag \$3 pass adj1 through))) near12 (mirror\$1 reflect\$5) same (waveguide\$1 wave near1 guide\$1) same ((second adj1 layer\$1) layers substrate\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:19
S88	915	((optical adj1 (cavit\$3 via\$1)) (vias hole\$1 aperture\$1 opening\$1) (optical near1 (path\$1 passag\$3 pass adj1 through))) near12 (mirror\$1 reflect\$5) same (waveguide\$1 wave near1 guide\$1) same ((second adj1 layer\$1) layers substrate\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:21
S89	301	S76 and S82 and S84 and S88	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:18
S90	192335	(chann\$4 inclin\$5 angl\$2) near12 (reflect\$4 mirror\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 14:59

S91	213	S89 and S90	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:24
S92	1	S73 and (ld\$1 laser\$1 vcsel emit\$5 light near1 sourc\$1) near12 (reflect\$4 mirror\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:59
S93	359655	(ld\$1 laser\$1 vcsel emit\$5 light near1 sourc\$1) near12 (reflect\$4 mirror\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 14:04
S94	1	S73 and (photo photodetect \$4 photodiode\$2 detect\$4 receiv\$4) near12 (reflect\$4 mirror\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:28
S95	377861	(photo photodetect\$4 photodiode\$2 detect\$4 receiv \$4) near12 (reflect\$4 mirror \$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:36
S96	1	S91 and S94 and S95	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:29
S97	105	S91 and S93 and S95	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 15:06
S98	53	S77 and S97	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 13:31
S99	1	S73 and (photolithog\$5 etch \$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 14:03
S100	50	S98 and (photolithog\$5 etch \$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 15:38
S101	1	S73 and (ld\$1 laser\$1 vcsel emit\$5 light near1 sourc\$1 photo photodetect\$4 photodiode\$2 detect\$4 receiv \$4 device) near7 form\$4 near7 (semiconduct\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 14:01
S102	221656	(ld\$1 laser\$1 vcsel emit\$5 light near1 sourc\$1 photo photodetect\$4 photodiode\$2 detect\$4 receiv\$4 device) near7 form\$4 near7 (semiconduct\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:36
S103	100	S89 and S102	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 14:03
S104	72	S103 not S98	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 14:03
S105	63	S104 and (photolithog\$5 etch \$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 14:03

S106	54	S105 and (photo photodetect\$4 photodiode\$2 detect\$4 receive\$4 laser\$1 vcsel emit\$5 light near\$1 source\$1) near\$12 (reflect\$4 mirror\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 14:06
S107	40	S106 and growth\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 14:06
S108	43	S106 and grow\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 14:38
S109	1	S73 and (wedge\$3 triangle\$2)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 14:42
S110	0	S73 and (wedge\$3 triangle\$2 pyramid) near\$7 (reflect\$4 mirror\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 14:43
S111	9349	(wedge\$3 triangle\$2 pyramid) near\$7 (reflect\$4 mirror\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 14:44
S112	6	S89 and S111	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 15:01
S113	31620	(conical pyramid\$4 semispherical spheric\$4) near\$12 (reflect\$4 mirror\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 15:00
S114	20	S89 and S113	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 15:01
S115	15	S114 not S112	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 15:09
S116	113	S89 and S93 and S95 and (photolithog\$5 etch\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 15:08
S117	113	S116 and semiconduct\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 15:08
S118	84	S117 and (photolithog\$5 etch\$4) and grow\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:38
S119	26	S118 not (S114 S112 S98 S108 S114)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S120	6	("20060245681" "20040120675" "20030099426" "20020028045" "5999670" "5170448").pn.	US-PGPUB; USPAT	OR	OFF	2006/11/07 18:56

S121	15	("20020028045" "20060245681" "20040120675" "20030099426" "20020028045" "5999670" "5170448" "20060245681" "20020097962" "20020028045" "6785447" "6706546" "6690845" "6684007" "5761350" "6539143" "6539143" "20030113067" "20060245681" "20040120675" "20030099426" "20020028045" "5999670" "5170448" "20050175286"). pn.	US-PGPUB; USPAT	OR	OFF	2006/11/07 15:45
S122	4	("20030099426" "5999670" "5170448" "20040120675"). pn.	US-PGPUB; USPAT	OR	OFF	2006/11/07 20:46
S123	4	Si22 and (absor\$5 semiconduct\$4 substrat\$4 etch \$5 photo photolithog\$5 grow \$5)	US-PGPUB; USPAT	OR	OFF	2006/11/07 18:54
S124	6	("20060245681" "20040120675" "20030099426" "20020028045" "5999670" "5170448").pn.	US-PGPUB; USPAT	OR	OFF	2006/11/07 18:54
S125	6	Si24 and (absor\$5 semiconduct\$4 substrat\$4 etch \$5 photo photolithog\$5 grow \$5)	US-PGPUB; USPAT	OR	OFF	2006/11/07 18:56
S126	6	("20060245681" "20040120675" "20030099426" "20020028045" "5999670" "5170448" "5999670").pn.	US-PGPUB; USPAT	OR	OFF	2006/11/07 18:56
S127	6	Si26 and (absor\$5 semiconduct\$4 substrat\$4 etch \$5 photo photolithog\$5 grow \$5)	US-PGPUB; USPAT	OR	OFF	2006/11/07 18:56
S128	1	("20020028045").pn.	US-PGPUB; USPAT	OR	OFF	2006/11/07 19:01
S129	1	Si28 and semiconduct\$5 near9 (substrate\$2 layer\$1) and (ld\$1 laser\$1 vcsl emit \$5 light near1 sourc\$1 photo photodetect\$4 photodiode\$2 detect\$4 receiv\$4 device) near12 (reflect\$5 mirror\$2)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:34
S130	765133	semiconduct\$5 same (substrate\$2 layer\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:18

S131	22507	(waveguide\$1 wave near1 guide\$1) same layer\$1	US-PGPUB; USPAT	OR	OFF	2006/11/07 19:18
S132	4075	((optical adj1 (cavit\$3 via\$1)) (vias holes apertures openings) (optical near1 (passag\$3 pass adj1 through path\$1))) same (waveguide\$1 wave near1 guide\$1) same layer\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:18
S133	915	((optical adj1 (cavit\$3 via\$1)) (vias hole\$1 aperture\$1 opening\$1) (optical near1 (path\$1 passag\$3 pass adj1 through))) near12 (mirror\$1 reflect\$5) same (waveguide\$1 wave near1 guide\$1) same ((second adj1 layer\$1) layers substrate\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:21
S134	301	S130 and S131 and S132 and S133	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:33
S135	1208	((opening\$1 channel\$1) (optical near2 (path\$1 passag\$3 pass adj1 through))) near12 (mirror\$1 reflect\$5) same (waveguide\$1 wave near1 guide\$1) same ( layer \$1 substrate\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:32
S136	522	S130 and S131 and S135	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:34
S137	354	S136 and semiconduct\$5 near9 (substrate\$2 layer\$1) and (ld\$1 laser\$1 vcsel emit \$5 light near1 sourc\$1 photo photodetect\$4 photodiode\$2 detect\$4 receiv\$4 device) near12 (reflect\$5 mirror\$2)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:35
S138	364	S136 and semiconduct\$5 near9 (substrate\$2 layer\$1 film\$1 coat\$4) and (ld\$1 laser \$1 vcsel emit\$5 light near1 sourc\$1 photo photodetect\$4 photodiode\$2 detect\$4 receiv \$4 device) near12 (reflect\$5 mirror\$2)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:35
S139	251	S138 and (photo photodetect \$4 photodiode\$2 detect\$4 receiv\$4) near12 (reflect\$4 mirror\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:37
S140	165	S139 and (ld\$1 laser\$1 vcsel emit\$5 light near1 sourc\$1) near12 (reflect\$4 mirror\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:37

S141	139	Si40 and (photolithog\$5 etch \$4) and (deposit\$4 grow\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:38
S142	646235	semiconduct\$5 near9 (substrate\$2 layer\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S143	301	Si30 and Si31 and Si32 and Si33	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S144	192335	(chann\$4 inclin\$5 angl\$2) near12 (reflect\$4 mirror\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S145	213	Si43 and Si44	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S146	359655	(ld\$1 laser\$1 vcsel emit\$5 light near1 sourc\$1) near12 (reflect\$4 mirror\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S147	377861	(photo photodetect\$4 photodiode\$2 detect\$4 receiv \$4) near12 (reflect\$4 mirror \$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S148	105	Si45 and Si46 and Si47	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S149	53	Si42 and Si48	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S150	221656	(ld\$1 laser\$1 vcsel emit\$5 light near1 sourc\$1 photo photodetect\$4 photodiode\$2 detect\$4 receiv\$4 device) near7 form\$4 near7 (semiconduct\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S151	100	Si43 and Si50	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S152	72	Si51 not Si49	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S153	63	Si52 and (photolithog\$5 etch \$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S154	54	Si53 and (photo photodetect \$4 photodiode\$2 detect\$4 receiv\$4 ld\$1 laser\$1 vcsel emit\$5 light near1 sourc\$1) near12 (reflect\$4 mirror\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S155	43	Si54 and grow\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39

S156	9349	(wedg\$3 triangl\$2 pyramid) near7 (reflect\$4 mirror\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S157	6	S143 and S156	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S158	31620	(conical pyramid\$4 semispherical spheric\$4) near12 (reflect\$4 mirror\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S159	20	S143 and S158	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S160	113	S143 and S146 and S147 and (photolithog\$5 etch\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S161	113	S160 and semiconduct\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S162	84	S161 and (photolithog\$5 etch \$4) and grow\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:39
S163	26	S162 not (S159 S157 S149 S155 S159)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 19:40
S164	99	S141 not (S162 S159 S157 S149 S155 S159)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 20:16
S165	1	"5786925".pn.	US-PGPUB; USPAT	OR	OFF	2006/11/07 20:16
S166	1	S165 and absor\$5	US-PGPUB; USPAT	OR	OFF	2006/11/07 20:17
S167	0	("2005020201707" ).pn.	US-PGPUB; USPAT	OR	OFF	2006/11/07 20:47
S168	1	("20050201707" ).pn.	US-PGPUB; USPAT	OR	OFF	2006/11/07 20:47
S169	1	S168 and (semiconduct\$5 absor\$5)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 21:09
S170	0	EP603549A1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 21:10
S171	0	EP603549	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/11/07 21:10
S172	3	"0603549"	EPO; DERWENT	OR	OFF	2006/11/07 21:11
S173	0	"0603 549"	EPO; DERWENT	OR	OFF	2006/11/07 21:11
S174	0	"0603 549 A1"	EPO; DERWENT	OR	OFF	2006/11/07 21:11



S175	0	"EP 0603 549 A1"	EPO; DERWENT	OR	OFF	2006/11/07 21:11
S176	0	"EP 0603549 A1"	EPO; DERWENT	OR	OFF	2006/11/07 21:12
S177	0	"EP 0603549A1"	EPO; DERWENT	OR	OFF	2006/11/07 21:12
S178	0	"EP 0603549"	EPO; DERWENT	OR	OFF	2006/11/07 21:12
S179	6	"603549"	EPO; DERWENT	OR	OFF	2006/11/07 21:12

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